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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,160	12/11/2001	Kouichi Harada	09792909-5276	6112

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EXAMINER
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HANNETT, JAMES M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/015,160

Applicant(s)

HARADA, KOUICHI

Examiner

James M. Hannett

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**1:** Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,012,587 Ochi et al.

**2:** As for Claim 5, Ochi et al teaches on Column 3, Lines 18-30 and depicts in Figure 2A a method of driving a solid state image pickup device (1) comprising a plurality of two-dimensionally arranged photoelectric conversion elements (2), gate portions (6) for reading out signal charges photo-electrically converted in the plural photoelectric conversion elements (2), a plural vertical transfer registers (3) for transferring the signal charges read out by the gate portions (6) in the vertical direction. Ochi et al teaches on Column 3, Lines 18-30 that each vertical shift register is a two-phase driven vertical shift register driven by electrodes  $\Phi 1$  and  $\Phi 2$ . Furthermore, the two-phase signal is a pulse that alternates between a high voltage and a low voltage, the examiner views the first driving voltage as the voltage when the driving signal is high and the second voltage as the voltage when the driving signal is low. Therefore both of these voltage values are applied to both electrodes  $\Phi 1$  and  $\Phi 2$  alternatively for transferring the signal charges in the vertical direction. Ochi et al teaches on Column 1, lines 33-40 the read-out operation of the signal charges which are photo-electrically converted by the photoelectric conversion elements (2) to the vertical transfer registers (3) is carried out on the plural

Art Unit: 2612

photoelectric conversion elements (2) independently every line by the driving voltages (two phase driven clock) applied to both the first ( $\Phi 1$ ) and second ( $\Phi 2$ ) transfer electrodes. Ochi et al teaches that the image data for every pixel in a line is read out and does not teach that the image data is mixed and then read out. Therefore, Ochi et al teaches that the image data is read out independently for every line of image data.

***Allowable Subject Matter***

3: Claims 1-4 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art teaches the use of an image sensor with a plurality of photoelectric conversion elements; gate portions for reading out the signals from the pixels; a plurality of vertical transfer registers; first transfer electrodes and second transfer electrodes. However, the prior art does not teach the detailed electrode and pixel layout structure as defined in Claim 1.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 4,603,343 Matsumoto et al teaches and depicts in Figure 1 the use of an image sensor with a plurality of vertical shift registers driven by a plurality of voltage signals; USPN 4,989,095 Whitesal et al teaches the use of a CCD image sensor which utilizes a horizontal shift register, a plurality of vertical shift registers and a plurality of voltage signals to drive the vertical shift registers; USPN 4,837,630 Ueda teaches the use of a CCD image sensor which utilizes a horizontal shift register, a plurality of vertical shift registers and a plurality of voltage signals to drive the vertical shift registers.

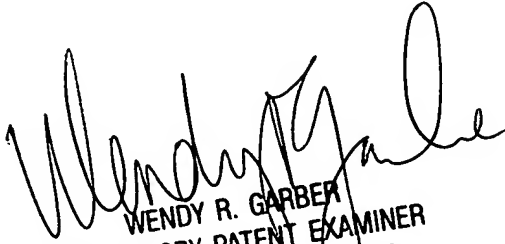
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett  
Examiner  
Art Unit 2612

JMH  
April 26, 2005

  
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SUPERVISORY PATENT EXAMINER  
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